

ANALYTICAL REPORT

July 25, 2018

Work Order: 1G80994

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Report To
Vicki Baker City of Sioux City 3100 S Lewis Blvd Sioux City, IA 51102

Work Order Information
Date Received: 07/12/2018 11:05AM Collector: F., Mark/S., Jessica Phone: (712) 224-5178 PO Number:

Project : Weekly Permit Testing

Project Number: Special Water Testing

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
1G80994-01	Raw-Influent Waste (C)			Matrix:Water		Collected: 07/10/18 07:15	
Nitrogen, total	102 mg/L	0.400	[CALC]	TKN+NOX	SAA	07/23/18 11:12	
Nitrogen, Nitrate+Nitrite	<0.40 mg/L	0.40	1BG0912	EPA 353.2	SAA	07/23/18 11:12	
Phosphorus, total	11.1 mg/L	1.00	1BG0843	EPA 365.4	SAA	07/19/18 16:25	
Nitrogen, Kjeldahl, total	102 mg/L	1.25	1BG0843	EPA 351.2	SAA	07/19/18 16:25	
1G80994-02	Effluent After Disinfection (G)			Matrix:Water		Collected: 07/11/18 13:16	
Oil and Grease	16 mg/L	4	1BG0574	EPA 1664A	JDK	07/16/18 13:59	
1G80994-03	Effluent After Disinfection (C)			Matrix:Water		Collected: 07/10/18 07:18	
Nitrogen, total	12.1 mg/L	0.400	[CALC]	TKN+NOX	SAA	07/23/18 11:12	
Nitrogen, Nitrate+Nitrite	9.24 mg/L	0.40	1BG0912	EPA 353.2	SAA	07/23/18 11:12	
Phosphorus, total	<0.40 mg/L	0.40	1BG0843	EPA 365.4	SAA	07/19/18 16:25	
Nitrogen, Kjeldahl, total	2.85 mg/L	0.50	1BG0843	EPA 351.2	SAA	07/19/18 16:25	

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Sioux City, IA 51102

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Determination of Conventional Chemistry Parameters - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1BG0574 - Wet Chem Preparation

Blank (1BG0574-BLK1)				Prepared: 07/13/18 Analyzed: 07/16/18						
Oil and Grease	ND	4	mg/L							
LCS (1BG0574-BS1)				Prepared: 07/13/18 Analyzed: 07/16/18						
Oil and Grease	38	4	mg/L	40.0000		93.8	78-114			
Matrix Spike (1BG0574-MS1)				Source: 1G80929-01 Prepared: 07/13/18 Analyzed: 07/16/18						
Oil and Grease	51	4	mg/L	40.0000	14	92.9	78-114			
Matrix Spike Dup (1BG0574-MSD1)				Source: 1G80929-01 Prepared: 07/13/18 Analyzed: 07/16/18						
Oil and Grease	51	4	mg/L	40.0000	14	94.3	78-114	1.11	18	

Batch 1BG0843 - Wet Chem Preparation

Blank (1BG0843-BLK1)				Prepared & Analyzed: 07/19/18						
Phosphorus, total	ND	0.40	mg/L							
Nitrogen, Kjeldahl, total	ND	0.50	"							
LCS (1BG0843-BS1)				Prepared & Analyzed: 07/19/18						
Phosphorus, total	19.7	0.40	mg/L	20.0000		98.4	90-110			
Nitrogen, Kjeldahl, total	19.4	0.50	"	20.0000		97.1	90-110			
Matrix Spike (1BG0843-MS1)				Source: 1G80919-02 Prepared & Analyzed: 07/19/18						
Phosphorus, total	39.3	0.80	mg/L	40.0000	0.972	95.9	90-110			
Nitrogen, Kjeldahl, total	40.6	1.00	"	40.0000	1.04	98.9	90-110			
Matrix Spike Dup (1BG0843-MSD1)				Source: 1G80919-02 Prepared & Analyzed: 07/19/18						
Phosphorus, total	40.8	0.80	mg/L	40.0000	0.972	99.5	90-110	3.61	10	
Nitrogen, Kjeldahl, total	41.7	1.00	"	40.0000	1.04	102	90-110	2.57	10	

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Determination of Conventional Chemistry Parameters - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1BG0912 - Wet Chem Preparation										
Blank (1BG0912-BLK1)				Prepared & Analyzed: 07/23/18						
Nitrogen, Nitrate+Nitrite	ND	0.10	mg/L							
LCS (1BG0912-BS1)				Prepared & Analyzed: 07/23/18						
Nitrogen, Nitrate+Nitrite	5.00	0.10	mg/L	5.00500		100	90-110			
Matrix Spike (1BG0912-MS1)				Source: 1G80992-01		Prepared & Analyzed: 07/23/18				
Nitrogen, Nitrate+Nitrite	19.8	0.40	mg/L	20.0200	ND	99.0	90-110			
Matrix Spike Dup (1BG0912-MSD1)				Source: 1G80992-01		Prepared & Analyzed: 07/23/18				
Nitrogen, Nitrate+Nitrite	20.3	0.40	mg/L	20.0200	ND	102	90-110	2.65	10	

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

Certified Analyses included in this Report

Method/Matrix	Analyte	Certifications	
<i>EPA 1664A in Water</i>			
	Oil and Grease	KS-NT,SIA1X	
<i>EPA 351.2 in Water</i>			
	Nitrogen, Kjeldahl, total	SIA1X,KS-NT	
<i>EPA 353.2 in Water</i>			
	Nitrogen, Nitrate+Nitrite	KS-NT,SIA1X	
<i>EPA 365.4 in Water</i>			
	Phosphorus, total	SIA1X,KS-NT	
Code	Description	Number	Expires
KS-KC	Kansas Department of Health and Environment-KC	E-10110	04/30/2019
KS-NT	Kansas Department of Health and Environment (NELAP)	E-10287	10/31/2018
MO-KC	Missouri Department of Natural Resources	140	04/30/2019
SIA1X	Iowa Department of Natural Resources	95	02/01/2019

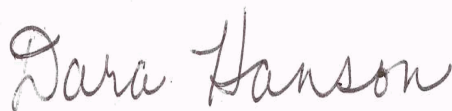
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End of Report

A handwritten signature in cursive script that reads "Dara Hanson".

Keystone Laboratories, Inc.

Dara Hanson
Project Manager I

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CHAIN OF CUSTODY RECORD									
REPORT TO Victi Baker City of Sioux City 3100 S Lewis Blvd Sioux City, IA 51102			INVOICE TO Arah Montagne City of Sioux City 3100 S Lewis Blvd Sioux City, IA 51102			Page 1 of 1 Printed: 6/25/2018 7:38:48AM www.keystone-labs.com			
SITE INFORMATION Sampler: <i>Mark F. Gessica S.</i> Project: WW - Raw/Effluent Special Water Testing			LAB USE ONLY Work Order: 1G80994 Temperature: _____ Turn-Cooler: No			Custody Seal Containers Intact COC/Labels Agree Preservation Confirmed Received on Ice			
SPECIAL INSTRUCTIONS None Turn Around Time <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH, need by ____/____/____									
Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number	
01-001	Raw-Influent Waste (G)	Water	GRAB	7/10/18	7:15am	1	og-t-1664	01	
02-001	Raw-Influent Waste (C)	Water	COMP	7/10/18	7:31am	1	nitrogen-total lbn-351.2 p-4-365.4	02	
03-001	Effluent After Disinfection (G)	Water	GRAB	7/11/18	1:16pm	1	og-t-1664	03	
04-001	Effluent After Disinfection (C)	Water	COMP	7/10/18	7:18am 7:55am	1	nitrogen-total lbn-351.2 p-4-365.4		
Relinquished By <i>Victi Baker</i> 7/11/18 10:00			Relinquished By <i>Karla Strubben</i> 7/25/18 11:05			Remarks:			
Received By _____			Received for Lab By _____			Original - Lab Copy • Yellow - Sampler Copy			

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